UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/961,283	09/25/2001	Hiroyuki Inagaki	Q66363	5322

7590 05/27/2004	EXAMINER
SUGHRUE MION ZINN MACPEAK & SEAS, PLLC	RO, BENTSU

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ART UNIT	PAPER NUMBER
2837	

DATE MAILED: 05/27/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	09/961,283	INAGAKI ET AL.
	Examiner	Art Unit
	Bentsu Ro	2837

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on *21 April 2004*.

2a) ☒ This action is **FINAL**.   2b) ☐ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1-8,11 and 12* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☒ Claim(s) *7,8,11 and 12* is/are allowed.

6) ☒ Claim(s) *1-6* is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☒ All   b) ☐ Some * c) ☐ None of:

      1. ☒ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____.

      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

SECOND OFFICE ACTION AFTER RCE ----- A FINAL REJECTION

1.   Claims 1-3 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by Jang US Patent No. 6,351,096 B1. (This is the same reference cited by the examiner in the previous office action.)

With respect to these claims, the examiner maintains the same rejection as that of the previous office action (the first office action after RCE, mailed 1/21/2004) because the amendment does not overcome the Jang's teaching, namely, the amended claims are still read onto Jang's teaching. See the following chart for the comparison between claims and Jang's teaching.

The claims:	Jang's teaching:
1. (Currently Amended) A vibration reduction control apparatus for an electric motor to be driven in accordance with a rotational signal, the apparatus comprising:	abstract lines 1-3 states that *"The present invention relates to a technique for outputting a vibration torque compensating current and removing a torque pulse ..."*; lines 16-19 states *"...a control device for generating a vibration torque compensating current Irc in order to generated a torque in the direction opposite to an actual vibration torque according to the actual rotation speed Wr..."*; thus, Jang's invention is to reduce the vibration torque of an electric motor which motor is driven in accordance with a rotational signal outputted from a speed detector;

	Fig. 9 shows an induction motor 61G (in terms of a Laplace transform parameter);
a control means for generating the signal to achieve a target rotation of the electric motor;	Fig. 9 shows a current controller 61E;
a detecting means for detecting a motor rotational number of the electric motor and outputting a motor rotational number signal based on the motor rotational number;	Fig. 9 shows a speed detector 21A;
a band pass filter means for extracting a vibration signal of a predetermined frequency band from the motor rotational number signal; and	Fig. 9 shows a vibration damping controller 61F;

Fig. 11 shows the structure of the vibration damping controller 61F;

inside the vibration damping controller 61F, there is a band-pass filter 81, the band pass filter 81 receives the induction motor speed signal Wr outputted from the speed detector 21A;

thus, the vibration damping controller 61F includes a band pass filter 81 for extracting a vibration signal of a predetermined frequency band from the motor rotational number signal as claimed;

the vibration damping controller 61F outputs a vibration torque compensating current Irc; |
| a feedback control means for correcting the target rotation of the electric motor based on the vibration signal; | Fig. 9 shows a subtractor 61D, which subtractor 61D is a feedback control means because (1), the subtractor 61D receives the feedback vibration torque compensating current Irc from the vibration damping controller 61F, and (2) a motor output current I* (i.e., a motor command current) is corrected based on the vibration torque compensating current Irc; |

	it is very important to note that the motor command current I* is derived from a motor speed command value Wr*, therefore, correcting the command current I* is same as correcting the command speed Wr*;
wherein the control means generates the corrected rotation signal based on the corrected target rotation within the predetermined frequency band.	Fig. 9 shows that the current controller 61E receives the correct signal from the subtractor 61D and generates a corrected control signal to control the motor 61G;
	the corrected signal should be inside the bandwidth of the band pass filter 81 because the signal from the speed detector 21A passes through the band pass filter 81, see Fig. 11.
2. (Same as that of claim 1, except claim 1 is claiming a "target rotation" whereas claim 2 is claiming a "target torque").	in Fig. 11, the output signal from the phase compensator 84 is a vibration torque compensating current Irc, this compensating current Irc is related to a compensating torque (claim 2) or a compensating rotation number (claim 1).
3. (Currently Amended) A vibration reduction control apparatus according to claim 1,	
wherein corrected rotation signal is based on a current instruction value I	Fig. 9 shows the output current I* which is a current instruction value;
and an angle instruction value θ to achieve the corrected rotation.	Fig. 9, the vibration damping controller 61F receives a position signal Sz, this position signal Sz is an angle instruction value;
	Fig. 11, the output signal from the phase compensator 84 is the vibration torque compensating current Irc, this Irc includes the correction signal from the both the band pass filter 81 and the position signal Sz.

2.   Claims 4-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jang.

With respect to claims 4-6, Jang does not specify the frequency band of the band pass filter. Thus, Jang does not teach the predetermined frequency band being in the range from 01. to 50 Hz.

However, the band pass filter is to extract the vibration frequency of the system. The vibration frequency for a vehicle (including the escalator) is usually very low because the large mass of the system. To the best understanding of the examiner, the vibration frequency is under several hertzs.

Albeit Jang does not specify the frequency range, the vibration frequency range of Jang should be in the range from 0.1 to 50 Hz.

3.   Claims 7, 8, 11, 12 are allowable.

4.   Applicant's remarks have been fully considered but they are not convincing. The claims clearly read onto Jang's teaching as shown in the comparison chart of paragraph 1 above.

Further, applicant argues that *Jang does not disclose, teach or suggest that the target rotation (torque) is corrected within the predetermined frequency band which includes resonance vibration of induction motor."*

This statement is inaccurate because the claims have never set forth a limitation of "a predetermined frequency band which includes resonance vibration of induction motor".

5.   Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

6.   Any inquiry concerning this communication should be directed to Bentsu Ro at telephone number 571 272-2072.

Bentsu Ro
Senior Examiner
Art Unit 2837